

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

#### **Listing of Claims:**

1.-20. (Canceled)

21. (Currently amended) A method for assessing the differentiation of a ~~population of~~ a culture comprising human embryonic stem cells for the presence of undifferentiated cells, comprising measuring podocalyxin-like protein (PODXL) expression level in the culture under a first set of conditions and a second set of conditions, wherein the second set of conditions comprises contacting the human embryonic stem cells with an agent suitable for inducing differentiation of the human embryonic stem cells and the first set of conditions comprising culturing human embryonic stem cells without the agent suitable for inducing differentiation of the human embryonic stem cells and ~~population of human embryonic stem cells~~; wherein a decrease in that PODXL expression level under the second set of conditions relative to the PODXL expression level under the first set of conditions ~~in the population measured at an earlier time point~~ indicates that there are more undifferentiated cells in the culture under the first set of conditions relative to the second set of conditions ~~the population is differentiating~~.

22. (Withdrawn) The method of claim 21, wherein the PODXL expression level is measured at the mRNA level.

23. (Withdrawn) The method of claim 22, wherein the PODXL expression level is measured at the mRNA level by PCR amplification.

24. (Previously presented) The method of claim 21, wherein the PODXL expression level is measured at the protein level.

25. (Previously presented) The method of claim 24, wherein the PODXL expression level is measured at the protein level by antibody assay.

26. (Previously presented) The method of claim 21, wherein the PODXL expression level is measured using flow cytometry.

27. (New) The method of claim 21, wherein the first set of conditions comprises culturing the cells in the presence of a feeder layer.

28. (New) The method of claim 21, wherein the first set of conditions comprises culturing the cells in the presence of a matrix and without a feeder layer.